



Commentary: Underestimating the Challenges of Avoiding a Ghastly Future

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Underestimating the Challenges of Avoiding a Ghastly Future

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INTRODUCTION

Bradshaw et al. (2021) make a call to action in light of three major crises—biodiversity loss, the sixth mass extinction, and climate disruption. We have no contention with Bradshaw et al.'s diagnosis of the severity of the crises. Yet, their call for scientists to “tell it like it is,” their appeal to political “leaders,” and the great attention they afford to human population growth as a main driver underpinning the three crises, rest on contested assumptions about the role of science in societal transformations, and are scientifically flawed and politically problematic. In this commentary, we challenge Bradshaw et al.'s assumptions concerning the nature of science, polity, and humanity as well as the implicit politics underlying their analysis and messaging. We end with an alternative call to action.

THERE IS ONE SCIENCE

Bradshaw et al. assume the existence of a united scientific community that can and should “tell it like it is” (p. 6). While there is broad scientific consensus on the existence and anthropogenic drivers of the crises, there is far less agreement on how we should understand the defining features of the Anthropocene, let alone how to address the crises (Biermann and Kim, 2020). The sciences of biodiversity conservation, global environmental change and sustainability are plural fields of multiple—at times competing and contested—knowledges, goals, and values (Evans, 2021; Lahsen and Turnhout, 2021). For instance, Bradshaw et al. highlight the role of human population growth as a central driver of the three crises. Contrary to this, historians and social scientists emphasize the role of centuries of European colonization and fossil capitalism (Malm and Hornborg, 2014; Moore, 2016).

THERE IS ONE POLITY

Bradshaw et al. assume that political leaders can be motivated to respond to the three crises through more “foreboding” warnings by scientists and a “good communications strategy” to raise an allegedly “weak” awareness. This logic flies in the face of long-established evidence within the social sciences. First, science-based awareness (or lack thereof) of environmental processes and crises is *not* the driving force in policy and politics (Jerneck et al., 2011; Fesenfeld and Rinscheid, 2021; Lahsen and Turnhout, 2021). Political and societal changes are driven by a complex set of societal conflicts, usually underpinned by social movements who contest the status quo by acting on real or perceived political, social, economic, and environmental inequalities and injustices (Giugni et al., 1999; Sinha, 2016). Scientists often play a role in such political struggles, but these struggles cannot be reduced to science-led processes of positive change (Castree, 2019; Isgren et al., 2019). Rather, science can and continues to be harnessed to achieve different and even competing political goals and environmental outcomes (Mansfield, 2021). Second, millions of people are already acutely aware of the socio-ecological crises described by Bradshaw et al. (2021) because they face them every day. In fact, many of them are actively trying to stop the assault on the environments that they depend on for their livelihoods (Scheidel et al., 2018, 2020), often risking their property, health and even their lives (Le Billon and Lujala, 2020). The idea that only the “future” will be “ghastly” reinforces a western, white and elitist framing of reality, since the present is already experienced as apocalyptic by many frontline communities (Silver, 2018; Whyte, 2020).

THERE IS ONE HUMANITY

Bradshaw et al. use well-worn neo-Malthusian tropes to frame an undifferentiated “humanity” in general, and human population growth more concretely, as a key driver of “many societal problems,” from food insecurity and malnutrition, soil degradation and biodiversity loss, pandemics and resource scarcity, crowding and joblessness, deteriorating infrastructure and bad governance, and conflicts and wars. *Scientifically*, a massive body of scholarship has thoroughly questioned such neo-Malthusian anxieties (Harvey, 1974; Leach and Fairhead, 2000; Peluso and Watts, 2001; Fletcher et al., 2014; Hendrixson and Hartmann, 2019; Kallis, 2019; Mehta et al., 2019; Ojeda et al., 2019). *Politically*, neo-Malthusian tropes offer an ethically problematic and dangerous framing that can mobilize forces on the far right (Gilman, 2020), while displacing much needed attention from growing patterns of uneven development, resource use, affluent consumption, poverty and inequality (Harvey, 1974; Wiedmann et al., 2020; Brand and Wissen, 2021).

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Less than 10% of global carbon emissions are attributable to the consumption patterns of the world’s poorest half while the top 1% are responsible for 15% of total emissions (Oxfam, 2020). Similar patterns of inequality can be observed with energy use (Oswald et al., 2020). At the same time, many globally important biodiversity areas and hotspots are in territories claimed and/or managed by Indigenous peoples, local communities, and Afro-descendants mainly in the global South (Fa et al., 2020)—the very regions whose residents are positioned as environmental threats by Bradshaw et al. (2021). Implicitly then, Bradshaw et al. end up accusing and putting the onus on those who presently lead more sustainable lives (see Greenberg, 2013), who have the least current and historical responsibility for the crises, and who wield the least of a voice in international scientific and political debates about how to address them.

DISCUSSION

We maintain that there is no universal understanding of the intertwined socio-ecological challenges we face. Nor do established scientific facts speak for themselves. Scientific messaging alone cannot adequately communicate to the public *how* socio-ecological crises should be addressed. Framing socio-ecological crises primarily as driven by population growth reveals a western, elitist and neo-colonial bias while it distracts from holding accountable more powerful forces in society.

Importantly, Bradshaw et al. do mention inequality and capitalism in passing as forces standing in the way of needed change. To us, these are not peripheral but central aspects of any scientific analysis that takes seriously the causes and drivers of biodiversity loss, the sixth mass extinction, and climate disruption.

Accordingly, we end our reply with a different call to action. Rather than voicing alarmist warnings, we ask for an engaged scientific community to stand in solidarity with frontline communities affected by and fighting against biodiversity loss and climate emergency all around the world. Rather than distracting attention through neo-Malthusian tropes, scientists should help expose the structural causes and drivers of inequality, overproduction and overconsumption. Rather than legitimizing the status quo by appealing to existing political elites, scientists should actively collaborate with those groups in society that push for and prefigure sustainable ways of living. By doing this, scientists can play their part in charting a course away from our ghastly past and present toward a more socially just and environmentally sustainable future.

AUTHOR CONTRIBUTIONS

JB wrote the original draft. All co-authors participated in writing, editing, and commenting on the commentary.

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